

What is claimed is:

1. A routing protocol device integrated with SIP call server, the routing
protocol device being provided between a first and a second network
5 systems, the SIP call server being an Session Initiation Protocol architecture
which can be coupled with plurality remote SIP agent client devices, the
routing protocol device comprising:

a first connecting port coupled with the first network system;

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a second connecting port coupled with the second network system;

and

a data packet processing module electrically connected to the first and

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second connecting ports for executing:

a routing protocol program to select the data packet transmission path

of the first and second network systems; and

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at least one SIP servo program, whereby after the remote SIP agent
client devices perform SIP registry and the locations are linked, an SIP IP
phone loop is formed for remote voice telecommunication.

2. The routing protocol device as claimed in claim 1, wherein the first and
25 second network systems are Internets or LAN.

3. The routing protocol device as claimed in claim 1, wherein the first network
system is coupled with a first remote SIP agent client device, while the

second network system is coupled with a second remote SIP agent client device.

4. The routing protocol device as claimed in claim 3, wherein the first and
5 second remote SIP agent client devices are computer mainframes or IP
phones for converting voice signal into digital signal or converting digital
signal into voice signal for bidirectional voice telecommunication.
5. The routing protocol device as claimed in claim 1, wherein the remote SIP
10 agent client device is a computer mainframe, a network hub, an IP phone
gateway or a PSTN gateway.
6. The routing protocol device as claimed in claim 1, wherein by means of
executing the routing protocol program, the data packet processing module
15 selects the data packet transmission path of the first network system via the
first connecting port.
7. The routing protocol device as claimed in claim 1, wherein by executing the
routing protocol program, the data packet processing module selects the data
20 packet transmission path of the second network system via the second
connecting port.
8. The routing protocol device as claimed in claim 1, wherein by executing the
SIP servo program, the data packet processing module forms an SIP proxy
25 server, an SIP registry server or an SIP location server.
9. The routing protocol device as claimed in claim 8, wherein the SIP registry
server enables the remote SIP agent client devices to perform SIP registry so

as to store the SIP URI of the remote SIP agent clients.

10. The routing protocol device as claimed in claim 8, wherein the SIP proxy
server serves to transmit the INVITE asking sent from the remote SIP agent
5 client device so as to perform voice phone call.

11. The routing protocol device as claimed in claim 8, wherein the location
server serves to seek the location of the remote SIP agent client device and
convert the location into SIP URI of the remote SIP agent client, whereby
10 the remote SIP agent client devices can directly bidirectionally
telecommunicate with each other by voice.

12. The routing protocol device as claimed in claim 1, wherein the data packet
processing module includes:
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a microprocessor unit mainly serving to execute the routing protocol
program and the SIP servo program; and

a memory unit electrically connected with the microprocessor unit for
20 storing at least one executed program, the URI of the remote SIP agent client
and the data packet to be transmitted.

13. The routing protocol device as claimed in claim 12, wherein the memory
unit is an ROM, a DRAM or a flash memory.